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Corey Johnson

Signature January 18, 200

Date of Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Scott et al.

Serial No.: 09/873,881

June 4, 2001 Filed:

For: Recombinant Multivalent Viral Vaccine

RESPONSE

Assistant Commissioner for Patents Box Sequence Washington, D.C. 20231

Sir:

1

In response to a Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, dated November 30, 2001, regarding sequence listing errors, Applicants herewith submit a corrected sequence listing as a Computer Readable Form and a Paper Copy. The CRF and the Paper Copy are the same. Applicants regret the error in the initial filing.

If any fee is due with this communication, please charge it to Deposit Account no. 08-2442.

Respectfully submitted,

HODGSON RUSS LLP

One M&T Plaza, Suite 2000 Buffalo, New York 14203-2391

(716) 848-1628

DATE: January 18, 2002

BFLODOCS: 648686 v1 (DWJ201!.DOC)





COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 2023I
www.uspto.gov

APPLICATION NUMBER

FILING/RECEIPT DATE

FIRST NAMED APPLICANT

ATTORNEY DOCKET NUMBER

09/873,881

06/04/2001

Fred W. Scott

18617.NEW

CONFIRMATION NO. 6373

FORMALITIES LETTER

OC00000007141372

Ranjana Kadle Hodgson Russ LLP Suite 2000 One M&T Plaza

Buffalo, NY 14203-2391

Date Mailed: 11/30/2001

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

Applicant is given **TWO MONTHS FROM THE DATE OF THIS NOTICE** within which to file the items indicated below to avoid abandonment. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of
the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as
indicated on the attached copy of the marked -up "Raw Sequence Listing." Applicant must provide a
substitute computer readable form (CRF) copy of the "Sequence Listing" and a statement that the content
of the sequence listing information recorded in computer readable form is identical to the written (on paper
or compact disc) sequence listing and, where applicable, includes no new matter, as required by 37 CFR
1.821(e), 1.821(f), 1.821(g), 1.825(b), or 1.825(d).

For questions regarding compliance to these requirements, please contact:

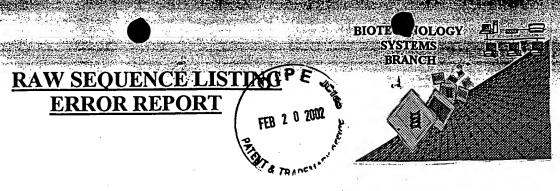
- For Rules Interpretation, call (703) 308-4216
- To Purchase Patentin Software, call (703) 306-2600
- For Patentin Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

A copy of this notice MUST be returned with the reply.

Customer Service Center

Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/873,88/ASource: $0/P \in 10/15/200/15$

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216. PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax) PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address: http://www.uspto.gov/web/offices/pac/checker



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/873,881A

DATE: 10/15/2001 TIME: 15:47:14

Input Set : A:\corrected sequence listing for Scott et al

Output Set: N:\CRF3\10152001\I873881A.raw

- 3 <110> APPLICANT: Scott, Fred W.
- 5 <120> TITLE OF INVENTION: Recombinant Multivalent Viral Vaccine
- 7 <130> FILE REFERENCE: 18617.0016
- 9 <140> CURRENT APPLICATION NUMBER: US 09/873,881A
- 10 <141> CURRENT FILING DATE: 2001-06-04
- 12 <150> PRIOR APPLICATION NUMBER: US 08/552,369
- 13 <151> PRIOR FILING DATE: 1995-11-03
- 15 <160> NUMBER OF SEQ ID NOS: 19

Does Not Comply Corrected Diskette Needed

pg 1,3-4

ERRORED SEQUENCES

932	<210>	SEQ ID	NO: 19
933	<211>	LENGTH:	1979

934 <212> TYPE: DNA

935 <213> ORGANISM: feline leukemia virus

110

937 <220> FEATURE:

938 <223> OTHER INFORMATION

	938	<223	3> O:	CHER	INF	ORMA:	rion	:									
	940	<400)> SI	EQUE	ICE:	19											
									gece								50
									aaa								95
	944	Met	Glu	Ser	Pro	Thr	His	Pro	Lys	Pro	Ser	Lys	Asp	Lys	Thr		
	945	1				5					10					15	
									gtg								140
	948	Ser	Trp	Asn	Leu	Ala	Phe	Leu	Val	Gly	Ile	Leu	Phe	Thr	Ile		
	949					20					25					30	
									cca								185
	952	Ile	Gly	Met	Ala		Pro	Ser	Pro	His		Ile	Tyr	Asn	Val		
	953					35					40					45	
			•				-		act				_				230
		\mathtt{Trp}	Val	Ile	Thr		Val	Gln	Thr	Asn		Gln	Ala	Asn	Ala		•
	957					50			•		55					60	
									gat								275
		Ser	Met	Leu	Gly		Leu	Thr	Asp	Ala	_	Pro	Thr	Leu	His		
	961					65					70					75	
									gac								320
		Asp					Val	Gly	Asp	Thr	_	Glu	Pro	He	Val		
	965			lelet		80					85					90	
									ggg								365
		Asn	Pro	Thr	Asn(Lys	His	Gly		_	Tyr	Ser	Ser	ser		
•	969					95					100					105	410
	971	tat	gga	tgt	aaa	act	aca	gat	aga	aaa	aaa	cag	caa	cag	aca	tac	410

972 Tyr Gly Cys Lys Thr Thr Asp Arg Lys Lys Gln Gln Gln Thr Tyr

975 ccc ttt tac gtc tgc ccc gga cat gcc ccc tcg ttg ggg cca aag 976 Pro Phe Tyr Val Cys Pro Gly His Ala Pro Ser Leu Gly Pro Lys

115

130

-) number are 455 in bold print -) due to eno about - apostuple

120

135

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/873,881A

DATE: 10/15/2001 TIME: 15:47:15

Input Set : A:\corrected sequence listing for Scott et al
Output Set: N:\CRF3\10152001\1873881A.raw

												ttt Phe					500
		GIY	THI	HIS	Cys	140	GIY	нта	GIII	ASP	145	PHE	Cys	AIG	Ala	150	
W>		~~~	+ 4+	a a a	200		aaa	maa	act	taa		aag	ccc	acc	tec		545
1/												Lys					343
Ψ.		GIY	Cys	GIU	1 111	155	GLY	Giu	1111	rrb	160	шуз	FIU	1111	Der	165	
%	985	+	~~~	+ > +	2+0	-	at a	222	343	~~~		agt	a a a	a a a	aat		590
) (Ser					390
		тъ	ASP	TÄT	116	170	Val	пÃЭ	ALY	GIY	175	Ser	GIII	пэр	Non	180	
M>			~~~	~~~	222		220	000	a+~	α++		cag	++0		aaa		635
												Gln					033
W>		Cys	GIU	GIY	цуз	185	LOII	PIU	neu	Val	190	GIII	FIIC	1111	GIII	195	•
W>		~~~	202	022	aaa		taa.	a20	~~~	aat		atg	taa	aaa	ttα		680
												Met					000
		СТА	ALG	GIII	АТа	200	ттЬ	ASP	GLY	FIU	205	Mec	TIP	GLY	пси	210	
M>		at a	+ 2.0	aat	202		+ = +	a a c	aat	ato		tta	ttc	aca	ata		725
																Ser	123
W>			тут	. Aly	, 1111	215	_	. ASE	PIC	, 116	220		· FIIC	. 1111	. va.	225	
W>				r ata	toa			àco		cet			ato	י ממפ		aac	770
) Asn	,,,
1./	1004	_	GII	· vai	. DCI	230		. 1111		, 110	235		·	. 017		240	
11-7			ato	tta	cct				CCC	CCa			caa	tet	caa	aca	815
																Thr	013
八 W>			vai	. Deu		245		נעטי	, 110	, 110	250		011		. 011	255	
M>			too		ata			cad	agg	CCC			aat	σаа	aαα	gcc	860
																Ala	
W>		_	001			260					265					270	
"			аσσ	r tet	att			acc	acc	ato			aaa	cac	att	ggg	905
																Gly	
W>			,			275					280		-	-		285	
••			gga	qat	agg	tta	ata	aat	tta	qta	caa	ı ggg	aca	tac	cta	gcc	950
																ı Āla	
W>			-		-	290					295	_		_		300	
	1023	tta	aat	gee	acc	gac	ccc	aac	aaa	act	aaa	gac	tgt	tgg	cto	c tgc	995
	1024	Leu	Asn	Ala	Thr	Asp	Pro	Asn	Lys	Thr	Lys	Asp	Cys	Trp	Lei	ı Cys	
W>	1025					305					310)				315	
1 /	1027	ctg	gtt	tct	cga	cca	ccc	tat	tac	gaa	ggg	att	gca	ato	tta	ı ggt	1040
1/	1028	Leu	Val	Ser	Arg	Pro	Pro	Tyr	Tyr	Glu	Gly	, Ile	Ala	Ile	e Leu	ı Gly	
M-12	1029					320					325	;				330	
1/	1031	acc	tac	agc	aac	caa	aca	aac	ccc	CCC	cca	tcc	tgo	cta	ı tct	act	1085
50 .	1032	Asn	Tyr	Ser	Asn	Gln	Thr	Asn	Pro	Pro	Pro	Ser	Cys	Lev	ı Sei	: Ile	
W>			•			335					340					345	
																atg	1130
	1036	Pro	Gln	His	Lys			Ile	Ser	Glu			Gly	Glr	ı Gly	Met	•
M>						350					355					360	
																aag	1175
		_	Ile	Gly	Thr			Lys	Thr	His			Leu	Cys	s Asr	Lys	
M>						365					370					375	
	1043	aca	caa	cag	gga	cat	aca	ggg	gcg	cac	tat	cta	gcc	gcc	ccc	aac	1220

RAW SEQUENCE LISTING

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	1044	Thr	Gln	Glr	ı Gly	/ His	Thi	Gly	Ala	His	Туг	Leu	Ala	Ala	Pro	Asn	
W>	1045					380					385					390	
	1047	ggc	acc	tat	: tgg	ged	: tgt	aac	act	gga	cto	acc	cca	tac	att	tcc	1265
	1048	Gly	Thr	Туг	Trp	Ala	Cys	Asn	Thi	Gly	Leu	Thr	Pro	Cys	Ile	Ser	
W>	1049			-		395				_	400			*		405	
	1051	atg	gcg	gtg	cto	aat	tgg	acc	tct	gat	ttt	tgt	atc	tta	atc		1310
	1052	Met	Ala	Val	Leu	Asr	Trp	Thr	Ser	Asp	Phe	Cys	Val	Leu	Ile	Glu	
W>	1053					410				~	415	_				420	
	1055	tta	tgg	ccc	aga	gto	act	tac	cat	. caa		gaa	tat	ata	tac		1355
	1056	Leu	Trp	Pro	Arq	Val	Thr	Tvr	His	Gln	Pro	Glu	Tvr	Val	Tvr	Thr	1333
W>	1057		-		_	425		- 4 -			430		-1-		-1-	435	
			ttt	qcc	aaa	get	gto	agg	tto	. cga		gaa	cca	ata	tca		1400
	1060	His	Phe	Ala	Lys	Āla	Val	Arq	Phe	Ara	Ara	Glu	Pro	Tle	Ser	Leu	1400
W>	1061				•	440				5	445				001	450	
	1063	acq	qtt	qcc	ctt	atq	tta	σσα	σσα	ctt		gta	ααα	aac	ata		1445
	1064	Thr	Val	Ăla	Leu	Met	Leu	Glv	Glv	Leu	Thr	Val	Glv	Glv	Tle	Ala	1113
W>	1065					455		-			460		1	1		465	
	1067	qcq	qqq	qtc	qqa	aca	aaa	act	aaa	αcc		ctt	σаа	aca	acc		1490
	1068	Ala	Gly	Val	Gly	Thr	Gly	Thr	Lys	Ala	Leu	Leu	Glu	Thr	Ala	Gln	1.50
W>	1069		_		_	470			-		475					480	
	1071	ttc	aga	caa	cta	caa	atg	gcc	atg	cac	aca	gac	atc	cag	qcc	cta	1535
	1072	Phe	Arg	Gln	Leu	Gln	Met	Ala	Met	His	Thr	Asp	Ile	Gln	Āla	Leu	
M>	1073					485					490	_				495	
	1075	gaa	gaa	tca	att	agt	gcc	tta	gaa	aag	tcc	ctg	acc	tcc	ctt	tct	1580
	1076	Glu	Glu	Ser	Ile	Ser	Ala	Leu	Glu	Lys	Ser	Leu	Thr	Ser	Leu	Ser	
M>	1077					500					505					510	
	1079	gaa	gta	gtc	tta	caa	aac	aga	cgg	ggc	cta	gat	att	cta	ttc	tta	1625
	1080	Glu	Val	Val	Leu	Gln	Asn	Arg	Arg	Glu	Leu	Asp	Ile	Leu	Phe	Leu	
M>	1081					515					520					525	
	1083	caa	gag	gga	ggg	ctc	tgt	gcc	gca	ttg	aaa	gaa	gaa	tgt	tgc	ttc	1670
	1084	Gln	Glu	Gly	Gly		Cys	Ala	Ala	Leu	Lys	Glu	Glu	Cys	Cys	Phe	
M>	1085			•		530		•			535					540	
	1087	tat	gcg	gat	cac	acc	gga	ctc	gtc	cga	gac	aat	atg	gcc	aaa	tta	1715
	1088	Tyr	Ala	Asp	His		Gly	Leu	Val	Arg		Asn	Met	Ala	Lys	Leu	
M>	1089					545					550					555	
	1091	aga	gaa	aga	cta	aaa -	cag	cgg	caa	caa	ctg	ttt	gac	tcc	caa	cag	1760
	1092	Arg	GIU	Arg	Leu		GIn	Arg	GIn	Gln		Phe	Asp	Ser	Gln		
M>	-					560					565					570	
	1095	gga	Lgg	רננ	gaa	gga	rgg	TTC	aac	aag	tcc	ccc	tgg	ttt	aca	acc	1805
TAT .	1096	GIY	ттр	Pne	GIU			Pne	ASN	гàг		Pro	Trp	Phe	Thr		
W>		at a	2++	+	+	575					580					585	
	1099	Lou	Tla	202	Cor	TIA	Mot	Clar	Dwo	LLa	Cta	atc	cta	CTC	cta	att	1850
W>	1100	пец	116	261	Ser	590	Met	GIY	PIO	Leu		тте	rea	Leu	ьeu		
M>	1101	ctc	ctc	tta	aac		taa	a to	att	220	595	++-	~+ ~			600	1005
	1104	T.eu	T.en	Dho	Glv	Dro	Cve	Tla	Lou	Acn	Cya λrσ	LLa	yıa	Cla	Dho	yta	1895
W>		u	_eu	- 11C	Этү	605	Cys	116	neu		610	ъeп	val	GIII			
** >	1107	aaa	gac	аσа	ata		ata	αta	cad			a++	++>	200		615	1040
W>	1108	Lvs	Asn/	ŽŽŠ	Tle	Ser	y - y Val	y ca Val	Gln	Ala	L.a.	Tla	LLA Tan	αCC Th≃	caa cl=	cay c1=	1940
., ,		~10		-my		-	447	4 CT	ATIT	TTG	TEN	TTE	TEI	TITE	GTH	GTU	
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RAW SEQUENCE LISTING

DATE: 10/15/2001

1.979

PATENT APPLICATION: US/09/873,881A

TIME: 15:47:15

Input Set : A:\corrected sequence listing for Scott et al

Output Set: N:\CRF3\10152001\1873881A.raw

620 630 W--> 1109 625

1111 tac caa cag ata aag caa tac gat ccg gac cga cca tga

1112 Tyr Gln Gln Ile Lys Gln Tyr Asp Pro Asp Arg Pro

W--> 1113 635

E--> 1117/bFLOdOcs:589477_1 (cm%d01)

Delete

589477

VERIFICATION SUMMARY DATE: 10/15/2001

PATENT APPLICATION: US/09/873,881A TIME: 15:47:16

Input Set : A:\corrected sequence listing for Scott et al

Output Set: N:\CRF3\10152001\1873881A.raw

```
L:21 M:283 W: Missing Blank Line separator, <220> field identifier
L:912 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
L:969 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:973 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:977 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:981 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:985 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:989 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:993 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:997 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1001 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1005 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1009 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1013 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1017 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1021 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1025 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1029 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1033 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1037 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1041 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1045 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1049 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1053 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1057 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1061 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1065 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1069 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1073 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1077 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1081 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1085 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1089 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1093 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1097 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1101 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1105 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1108 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
L:1109 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1113 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19
L:1117 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:1995 SEQ:19
L:1117 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:18
L:1117 M:112 C: (48) String data converted to lower case,
L:1117 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1979 Found:1995 SEQ:19
```